The US Congress, in re-authorizing the Atlantic Striped Bass Conservation Act in 1988, included an amendment directing the federal government, in cooperation with state agencies, to undertake an additional study of the Roanoke-Albemarle population and to report their recommendations within three years. In North Carolina, DMF and the North Carolina Wildlife Resources Commission, in cooperation with the US Fish and Wildlife Service, are preparing a cooperative plan to meet the requirements of Amendment #4. All of these planning efforts are directed toward managing the North Carolina stock in concert with the Atlantic Striped Bass Conservation act to restore the stock to sustained fishable levels.

C. 10. White Perch

A slow-growing fish related to striped bass, white perch has replaced striped bass as a target species for many Albemarle Sound commercial and recreational fishermen. White perch are sought by gill net fishermen in Albemarle Sound, leading to problems in taking striped bass as by-catch (Henry 1987, 1989). White perch spawn in the lower Roanoke River and throughout the Chowan River, and they utilize most of the Albemarle Sound area as a nursery. They are especially susceptible to red sore disease, which may be responsible for the extremely low landings of 1980. Commercial landings from 1985 to 1988 were among the highest on record. Landings declined sharply in 1989-1990, possibly because of gill net restrictions designed to conserve striped bass. Little research on white perch has been conducted (Conover 1958; Keefe and Harriss 1981); thus, status of the stock is unknown.

C. 11. Shrimp

Brown, white (P. setiferus), and pink shrimp all contribute to North Carolina's shrimp harvest. Brown shrimp comprise the majority of the landings (69%). North Carolina is the largest producer of brown shrimp on the Atlantic Coast. Most shrimp are harvested with trawls in the estuarine waters of North Carolina, with Pamlico and Core Sounds serving as major fishing grounds. Brown shrimp support the major summer fishery, especially in Pamlico Sound. As an annual crop, shrimp abundance depends principally on annual environmental conditions, especially the salinity and temperature of nursery areas (Hunt et al 1980; Jones and Sholar 1981; and Hettler and Chester 1982). Thus, landings fluctuate widely from year to year. Especially critical for brown shrimp are nursery area conditions during April and May of each year. Examples include the record harvest of 6.4 million pounds of brown shrimp in 1985 during warm, dry conditions versus the poor harvest of approximately one million pounds during the relatively cool, wet conditions of 1984. The strong correlation ($r^2 > 0.9$) between the number of juvenile shrimp captured in the DMF shrimp trawls and the number of adults harvested, allows good estimates of the annual crop to be made early in the season (DMF, unpublished data). Pink shrimp production is very dependent on water temperatures, since juveniles over-winter in the relatively shallow waters of Pamlico and Core Sounds. For example, pink shrimp landings dropped from approximately 3 million pounds in 1989 to approximately 1.5 million pounds after relatively cold periods during the winter of 1989-90. Recreational shrimpers probably take significant quantities of shrimp, but the amount is unknown (Pate 1977). The DMF is able to assess annual production of brown shrimp through an intensive assessment sampling program for juveniles that has been in place since 1972.

C. 12. Blue Crabs

In terms of total harvest, value, numbers of fishermen, amount of gear, processing plants, and employment, blue crabs support North Carolina's most important commercial fishery. Landings increased steadily since the mid-1970s, reaching all time peaks during the early 1980s, before declining through 1986. Landings increased again between 1987 and 1990, reaching the third highest value on record (36.9 million pounds). Pamlico Sound is the center of the fishery, although contributions from